BOARD MEETING DATE: March 6, 2009
AGENDA NO. 24
ATTACHMENT 3

Proposed Guiding Principles Regarding Promotion of Smart Grid Technology

A smart grid is a collection of energy transmission, control and monitoring devices, software, networking, and communications infrastructure throughout the electrical distribution grid. With enhanced communications and feedback, the transmission grid continually matches power production to demand, thus allowing the utilities to run the power grid more efficiently. Likewise, consumers will have access to information that will allow them to lower their energy usage and costs.

Since a Smart Grid network reduces power demand, resulting in reduced need for generation and reduced emissions, it is recommended that AQMD support smart grid system development and deployment, consistent with the following elements:

1. The use of smart grid technology that improves reliability, security, and efficiency of the electric grid should be encouraged and facilitated. Cost reduction opportunities should also be maximized wherever possible.

2. Smart grid upgrades to the electrical distribution system should make it more accommodating of wind, solar, geothermal, and other renewable energy sources where possible.

3. Smart grid upgrades to the electrical distribution system should facilitate installation of equipment that provides more systems data that enables improved management of electrical distribution during emergencies where possible.

4. The Smart Grid network should be as technology neutral as possible, and based on open standards to maximize results from technology investments which allow for the switch out of components without replacing whole systems.

5. The Smart Grid network should, to the extent feasible, include planning and funding for additional transmission lines that can transport power from one region to another and connect 'power-demand cities' with potentially remote areas where renewable power is likely to be generated.

6. The Smart Grid network should allow for the transmission of power and energy across regions and across states consistent with appropriate siting criteria.

7. In view of access to consumer information by the Smart Grid, the network must be kept secure and the consumer's privacy must be safeguarded from unauthorized access and fraud.

8. Incentives should be provided, wherever feasible and cost-effective, to consumers for in-home devices such as smart thermostats, smart appliances, lighting controls, in-home energy displays, and load control switches.

9. Incentives should be provided wherever feasible and cost-effective to businesses for automating commercial offices and/or buildings, including smart thermostats, lighting controls, smart thermostats, energy displays, and load control switches.

10. Incentives should be provided to consumers for investment in intelligent electrical network equipment for enhancing monitoring, control and distribution where feasible and cost-effective.

11. Incentives should be provided to utility companies for installation of grid monitoring and control devices such as transformer monitors and voltage sensors, wherever feasible and cost-effective.

12. Incentives should be provided to cities that incorporate electric vehicle integration to connection stations where feasible and cost-effective.

13. Any grant or incentive programs should give priority to environmental justice areas and areas with disproportionate air quality impacts.